LANDS AND FORESTS
TECHNICAL NOTE

PELLET GROUP INVENTORY, NOVA SCOTIA DEER HARVEST 1989

Art Patton

The 1989 Pellet Group Inventory sampled 452 of the 456 randomly located plots. Based on reported data from this inventory, the provincial overwintering deer population was calculated to be between 104,168 and 131, 320. Sampling of indices does not result in an exact number but rather a population range. For comparative purposes the midpoint of this 1989 range suggests that this year's spring herd was down about 11.9 per cent from that of 1988.

As previously reported, Nova Scotia deer herds rose above expected levels over a period of mild winters and extensive forest cutting. With the return of more normal winters in 1986-87 and 1987-88, pellet group inventories indicated spring population declines. We had a relatively mild winter in 1988-89, and perhaps this condition is reflected in the fact that the index decline was only about half as much as last spring's. A mild winter would not be reflected in a population increase; the only possible increase will come from reproduction added this spring. Hopefully the mild winter provided greater access to food and reduced energy demand, resulting in better conditioned deer. If so, we would expect the improved conditioning to be reflected in greater fawn production, which, although from a reduced parent stock, would begin to retard the downward trend.

Table 1 shows probable density and population ranges by county, region and province. Because this survey was designed to reflect provincial trends and not county trends, these figures are wide-ranged and should not be misconstrued.

Even the regional ranges are quite broad. Table 2 presents annual midpoints of population ranges by region. These are merely trend indicators, not actual population numbers. Note that the figure for western Nova Scotia is up from the 1988 figure. This probably reflects mild winter conditions and better reproductive returns in the western herds last year. For the third consecutive year eastern Nova Scotia continues to have significant decline in population index numbers. Cape Breton indices are down nearly 17 per cent for the second year in a row.

During the pellet group inventory we also record indices to moose populations. However, due to lower density, the probable population range is much broader and less reliable.

Table 3 indicates index figures for moose, providing an insight into their relative distribution throughout the province. The department also conducts other population trend studies. A 10-year block survey suggests moose density for the study area in Cumberland-Colchester (Hall, 1989) is .11 moose/km^2—well within the range indicated by the pellet group inventory for the eastern region. An aerial census in the highlands of Inverness and Victoria counties suggested a moose population of about 2,000 animals (Banks, pers. com.). This is again well within the range indicated for Cape Breton by this inventory.

Hall, Ross. June 1989. Moose and deer population estimates using pellet group surveys in Moose Zone 11. [Unpublished report.] Department of Lands and Forests.

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Table 1. *Overwintering deer population ranges by county, 1989.*

County	No of Plots	Probable Deer per km²	Probable Deer Population Range
Lunenburg	26	1.110–2.538	2723–6225
Queens	18	0.790–2.938	1441–5359
Shelburne	22	1.257–2.650	2836–5979
Yarmouth	20	0.782–2.353	1443–4341
Digby	20	0.839–3.901	1925–8950
Annapolis	25	2.438–4.900	6447–12957
Kings	17	1.510–6.103	2374–9596
Western	**148**	**1.993–2.859**	**29674–42434**
Hants	26	1.037–2.345	2675–6050
Halifax	50	0.975–1.867	4733–9063
Cumberland	35	1.579–3.717	5841–13749
Colchester	31	1.327–2.825	3928–8362
Pictou	23	2.554–8.440	5977–19750
Antigonish	11	0.395–4.959	452–5678
Guysborough	37	1.716–3.751	6485–14177
Eastern	**213**	**2.039–2.929**	**43548–62556**
Cape Breton	21	1.537–6.067	4822–19034
Inverness	29	1.742–5.038	5403–15627
Victoria	23	1.284–4.748	2774–10258
Richmond	18	2.652–7.058	3014–8029
Cape Breton Island	**91**	**2.777–4.584**	**26485–43719**
Province	**452**	**2.394-3.018**	**104168-131320**

Table 2. *Midpoints of range of estimated overwintering deer population by region, Nova Scotia, 1982–1989.*

Year	Western	Eastern	Cape Breton	Province
1982	19752	54455	25992	102658
1983	33020	66028	26239	127185
1984	30076	71761	36623	132713
1985	40350	90555	42917	165782
1986	43178	99739	50547	184057
1987	36924	87565	51406	167087
1988	33947	66635	42154	133583
1989	36121	53052	35096	117744

Table 3. *Overwintering moose population ranges by county, 1989.*

County	Probable Moose per km²–Range	Propable Moose Population Range
Lunenburg	0	0
Queens	0–0.117	0–213
Shelburne	0–0.868	0–1958
Yarmouth	0–0.303	0–559
Digby	0	0
Annapolis	0	0
Kings	0	0
Western	**.007–0.154**	**104–2293**
Hants	0	0
Halifax	0–0.166	0–806
Cumberland	0–0.294	0–1088
Colchester	0–0.742	0–2196
Pictou	0–0.321	0–751
Antigonish	0	0
Guysborough	0–0.033	0–125
Eastern	**0.040–0.713**	**854–3695**
Cape Breton	0	0
Inverness	0–0.422	0–1309
Victoria	0.299–1.422	646–3072
Richmond	0	0
Cape Breton Island	**0.089–0.436**	**849–4158**
Province	**0.077-0.182**	**3350–7919**